

REMARKS

The present amendment is in response to the Office Action, dated January 2, 2003, where the Examiner has rejected claims 1-23. By the present amendment, claims 1-7, 9-10, 12-19, 21 and 23 have been cancelled, claims 8, 11, 20 and 22 have been amended, and new claims 24-47 have been added. Accordingly, claims 8, 11, 20, 22 and 24-47 are pending in the application. Reconsideration and allowance of pending claims 8, 11, 20, 22 and 24-47 in view of the amendments and the following remarks are respectfully requested.

A. Rejection of Claims 1, 2, 6 and 7 under the Judicially Created Doctrine of Obviousness-Type Double Patenting

The Examiner has rejected claims 1, 2, 6 and 7 under the judicially created doctrine of obviousness-type double patenting. Applicant respectfully submits that claims 1, 2, 6 and 7 have been cancelled by the present amendment. Accordingly, it is respectfully submitted that the Examiner's rejection of claims 1, 2, 6 and 7 have been rendered moot.

B. Rejection of Claims 1-23 under 35 USC § 102(b)

The Examiner has rejected claims 1-23 under 35 USC § 102(b), as being anticipated by Gupta et al. (USPN 5,459,814). Applicant respectfully submits that independent claims 8 and 20, as amended, and new independent claims 32 and 40, are patentable over Gupta.

Claim 8, as amended, recites: "extracting a parameter from the speech signal; estimating a noise component of the parameter; removing the noise component from the parameter to generate a noise-free parameter; comparing the noise-free parameter with a pre-determined threshold; and associating the speech signal with a class in response to the comparing step."

The Examiner states that Gupta discloses "removing the noise component from the parameter" at col. 6, lines 1-13, where Gupta reads: "an average background noise level is

computed by sampling the average level at 1 kHz and using the filter in equation 1.” The Examiner further states that Gupta discloses “comparing the parameter with a set of at least one threshold” at col. 5, lines 5-31.

Applicant respectfully submits that Gupta fails to disclose, teach or suggest at least the following elements of claim 8: “removing the noise component from the parameter to generate a noise-free parameter; comparing the noise-free parameter with a pre-determined threshold.” In fact, Gupta operates according to a prior art method described in the background section of the present application, as follows:

The present solutions include estimating the level of background noise in a given environment and, depending on that level, varying the thresholds. One problem with these techniques is that the control of the thresholds adds another dimension to the classifier. This increases the complexity of adjusting the thresholds and finding an optimal setting for all noise levels in not generally practical. (Page 2, lines 19-23.)

The Examiner’s attention is directed to col. 6 of Gupta, where it is disclosed that the threshold value is updated and tracks the background noise. Accordingly, Gupta teaches that the noise component is not removed from the speech parameter prior to comparison with the threshold, rather the threshold is varied to track the background noise. In a sharp contrast, according to claim 8, the noise component is removed from the speech parameter to generate a noise-free parameter and, therefore, the pre-determined threshold of claim 8 does not need to track the noise level, since the pre-determined threshold is compared against the noise-free parameter.

Accordingly, it is respectfully submitted that claim 8 and its dependent claims 11 and 24-29 should be allowed.

Claim 20, as amended, in part recites: “forming a set of noise-free parameters based on the speech parameters; comparing each of the noise-free parameters with each corresponding threshold of a set of thresholds.” Accordingly, at least for the reasons stated above in conjunction with patentability of claim 8, it is respectfully submitted that claim 20 and its dependent claims 22, 30 and 31 should also be allowed.

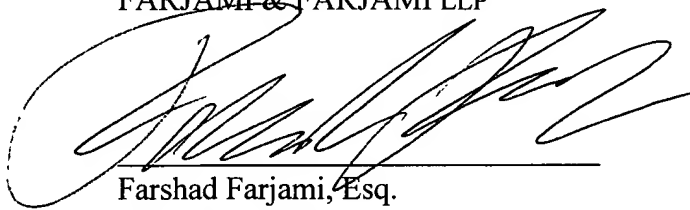
Claim 32 in part recites: “a noise removal module configured to remove the noise component from the parameter to generate a noise-free parameter; a comparator module configured to compare the noise-free parameter with a pre-determined threshold.” Accordingly, at least for the reasons stated above in conjunction with patentability of claim 8, it is respectfully submitted that claim 32 and its dependent claims 33-39 should also be allowed.

Claim 40 in part recites: “code for removing the noise component from the parameter to generate a noise-free parameter; code for comparing the noise-free parameter with a pre-determined threshold.” Accordingly, at least for the reasons stated above in conjunction with patentability of claim 8, it is respectfully submitted that claim 40 and its dependent claims 41-47 should also be allowed.

C. Conclusion

For all the foregoing reasons, consideration and examination of claims 8, 11, 20, 22 and 24-47 pending in the present application are respectfully requested. The Examiner is invited to contact the undersigned for any questions.

Respectfully Submitted;
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